

HUAWEI IdeaHub S2, ES2, S2 Pro, and ES2 Pro 23.0

OPS Configuration

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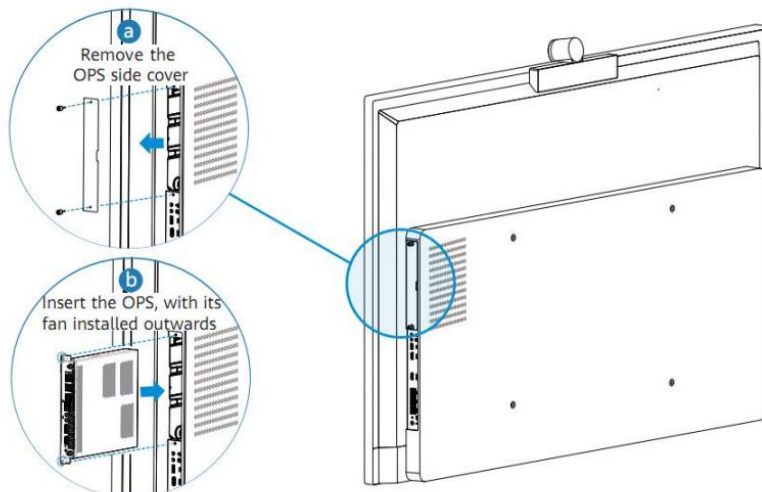
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1 OPS Installation

Install the Open Pluggable Specification (OPS) on the back of the display. (Before installing or uninstalling the OPS, ensure that the display is powered off. Otherwise, the OPS may be abnormal.)


Different OPS models differ slightly in appearance and screw positions, but their installation methods are similar. [Figure 1](#) shows an example.

Figure 1 OPS Installation



NOTE

The OPS supports the Windows 10 IoT Enterprise operating system. After the OPS is installed, the Windows operating system is automatically activated after the device is powered on and connected to the network.

- If the OPS Windows operating system is not activated due to a network exception or network verification failure, tap  and choose **Settings > Update and security > Activate** when the network is connected.
- If a message such as "we can't activate Windows on this device..." is displayed during the activation of the OPS Windows operating system, tap **troubleshooting** to try again when the network is connected. The operating system will be automatically activated based on the preset key.

2 OPS Network Configuration

The OPS supports wired and wireless network connection modes. For details about the configuration, see the *OPS User's Manual* delivered with the product.

Connection over a Cable

When the OPS and large screen share a wired network, the OPS, without connecting to a network cable, can directly use the wired network of the large screen. If the OPS and the large screen are on different networks, the OPS must be connected to a network cable.

OPS and Large Screen Share the Wired Network

You do not need to connect a network cable to the OPS. You only need to set network parameters to connect the OPS to the network of the large screen.

- If a DHCP server has been configured on the network, the OPS automatically obtains a dynamic IP address after being inserted into the large screen. No other configuration is required.
- If no DHCP server is configured on the network, you need to manually configure the static IP address and default gateway address of the OPS-USB NIC.
- If a DNS server is deployed on the network, configure the DNS server address.

OPS and Large Screen Use Different Networks

An independent network cable needs to be inserted into the OPS and network parameters need to be configured.

- If a DHCP server has been configured on the network, the OPS automatically obtains a dynamic IP address after the network cable is properly connected. No other configuration is required.
- If no DHCP server is configured on the network, you need to manually configure the static IP address and default gateway address of the OPS-Ethernet NIC.
- If a DNS server is deployed on the network, configure the DNS server address.

Connection Using a Wireless Network

The wireless networks of the OPS and large screen cannot be shared. If wireless access is used, configure the wireless networks of the OPS and large screen separately.

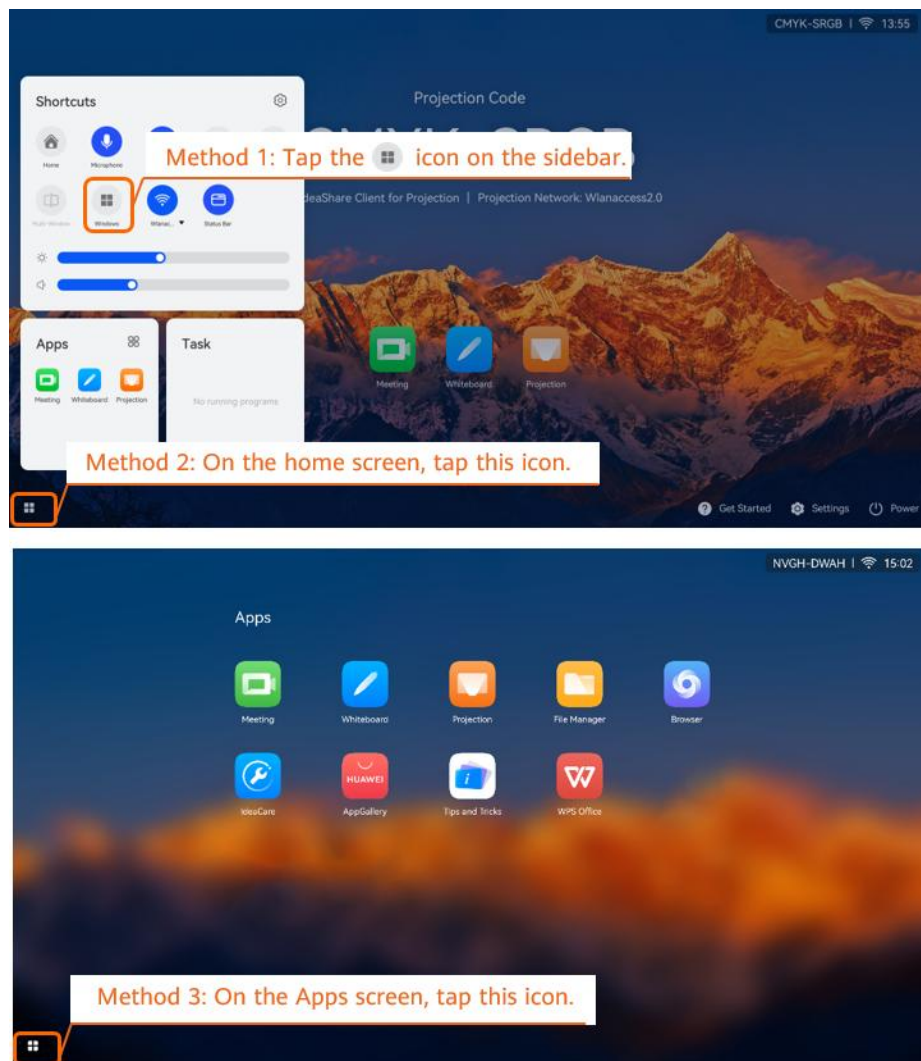
3 Access to the Windows UI

The large screen can be in HarmonyOS or Windows mode. By default, the large screen enters the HarmonyOS mode. You can access the Windows UI from the HarmonyOS mode by tapping the Windows app or switch from the HarmonyOS mode to Windows mode.


Accessing the Windows App UI from the HarmonyOS Mode

The HarmonyOS mode supports native meeting, projection, and whiteboard apps. The large screen can access the Windows app UI from the HarmonyOS mode. After the large screen is restarted, it enters the HarmonyOS mode by default. There are three methods to access the Windows app UI from the HarmonyOS mode. See [Figure 1](#).

Figure 1 Accessing the Windows app UI



NOTE

Method to access the HarmonyOS mode from the Windows app UI: Tap the  icon on the sidebar to exit the Windows app UI.

Switching from the HarmonyOS Mode to Windows Mode

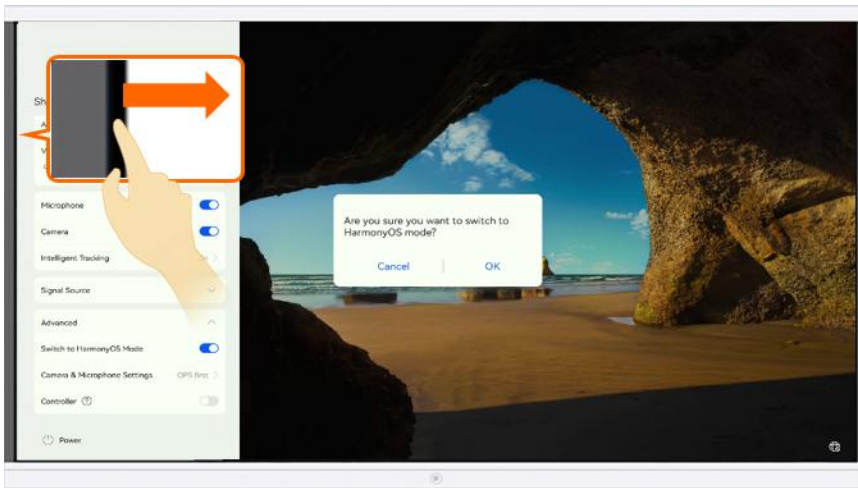
Switching from the HarmonyOS mode to Windows mode: On the home screen of the large screen in HarmonyOS mode, choose **Settings** > **Advanced** > **System** > **System Mode** and select **Windows mode**. After the large screen is switched to the Windows mode, the system enters the Windows mode by default when the large screen is powered on or restarted. The method of using the large screen in Windows mode is the same as that of using a PC.

NOTE

[Figure 2](#) shows how to switch the Windows mode to HarmonyOS mode.

In Windows mode, swipe right from the left edge of the large screen to display the shortcut operation page. Tap **Advanced** and then tap **Switch to HarmonyOS Mode**. On this screen, you can adjust the brightness and volume, switch the intelligent tracking mode, and power off or restart your large screen.


Figure 2 Switching to HarmonyOS mode



4 Basic Configuration

This section describes how to perform configurations to invoke the soft keyboard and built-in camera and microphone of the large screen in Windows mode.

Using the Soft Keyboard

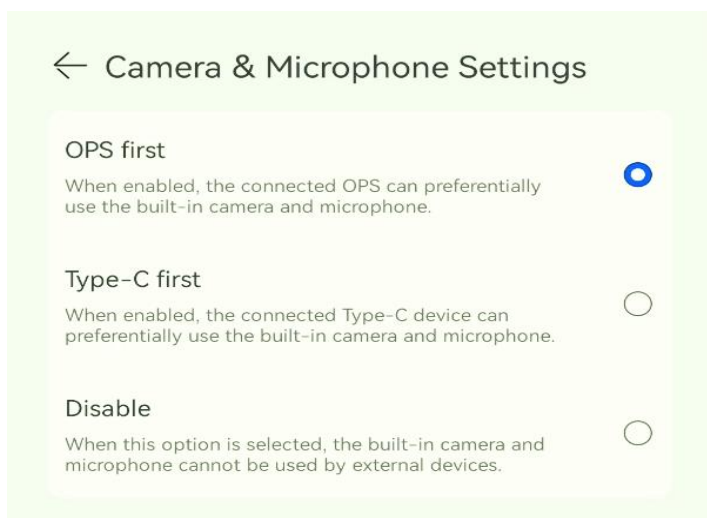
In the lower left corner of the Windows UI, tap  and choose **Settings > Device > Input > Touch keyboard** and enable **Show the touch keyboard when not in tablet mode and there's no keyboard attached**.

Using the Built-in Camera and Microphone of the Large Screen

To use the built-in camera and microphone of the large screen in the OPS scenario, perform the following steps:

1. In Windows mode, swipe right from the left edge of the large screen to display the shortcut operation page, choose **Advanced > Input/Output > Camera & Microphone Settings**, and select **OPS first**, as shown in [Figure 1](#).

Figure 1 Camera & Microphone Settings



2. Use the built-in camera and microphone of the large screen.

5 External Devices

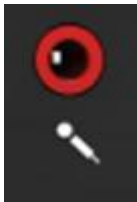
In Windows mode, external devices can be connected in the following ways: 1. Connect an external microphone, speaker, and camera to the OPS. 2. Connect an external microphone and speaker to the large screen.

Connecting External Devices to the OPS

External Microphone

You can simply connect an external microphone to the 3.5 mm audio input port (as shown in [Figure 1](#)) of the OPS for plug-and-play experience.

Figure 1 3.5 mm audio input port



NOTE

Echo occurs when the external microphone is used with the built-in speaker of the large screen. It is recommended that the external microphone and speaker be connected at the same time.

External Speaker

You can simply connect an external speaker to the 3.5 mm audio output port (shown in [Figure 2](#)) of the OPS for plug-and-play experience.

Figure 2 3.5 mm audio output port



External Camera

You can simply connect an external camera (for example, Camera 200 Cloud) to the USB 3.0 port (shown in [Figure 3](#)) of the OPS for plug-and-play experience.

Figure 3 USB 3.0 port



Connecting External Devices to the Large Screen

The following table lists the capabilities and methods of connecting external devices to ports of a large screen in Windows mode.

Table 1

| Port | Supported or Not | Configuration Mode | Remarks |
|----------|------------------|--|---------|
| USB | Yes | In HarmonyOS mode, choose Settings > Advanced > Input/Output > USB and set USB Mode to Windows mode . | - |
| LINE IN | No | N/A | - |
| LINE OUT | Yes | N/A | - |
| HDMI IN | No | N/A | - |
| HDMI OUT | Yes | Log in to the web interface, choose System Settings > Input/Output > Audio , set Audio output to HDMI , and click Save . | - |
| HD-AI | Yes | In HarmonyOS mode, choose Settings > Advanced > Input/Output > Camera & Microphone Settings , and select OPS first . | - |

6 Software Installation

On the Windows UI, you can search for and download the software using a browser or insert a USB flash drive to install the software.

Download via a Browser

On the Windows UI, open the browser, search for the software name, and download and install the software.

NOTE

Before downloading the software, ensure that the device is connected to the Internet.

Download via a USB Flash Drive

Method 1: Use the USB function of the large screen.

1. On the Windows UI, configure the USB mode as follows before you use the USB function of the large screen: In the lower right corner of the home screen in HarmonyOS mode, choose **Settings > Advanced > Input/Output > USB** and set **USB Mode** to **Windows mode**.
2. Insert a USB device, for example, a USB flash drive, to the large screen in the lower right corner of the large screen.

3. Open **This PC**, open the downloaded installation package in the USB flash drive, copy the package to the Windows disk, and install the software.

Method 2: Use the USB function of the OPS.

1. Connect a USB device, such as a USB flash drive, to the OPS.
2. Open **This PC**, open the downloaded installation package in the USB flash drive, copy the package to the Windows disk, and install the software.

7 Content Sharing

On the Windows UI, two common methods can be used to share content: use a USB device to share content or use the OPS service end for projection sharing.

Content Sharing Using a USB Flash Drive

Method 1: Use the USB function of the large screen.

1. On the Windows UI, configure the USB mode as follows before you use the USB function of the large screen: In the lower right corner of the home screen in HarmonyOS mode, choose **Settings > Advanced > Input/Output > USB** and set **USB Mode** to **Windows mode**.
2. Insert a USB device, for example, a USB flash drive, to the large screen in the lower right corner of the large screen.
3. Open **This PC** and open the file in the USB flash drive to share it.

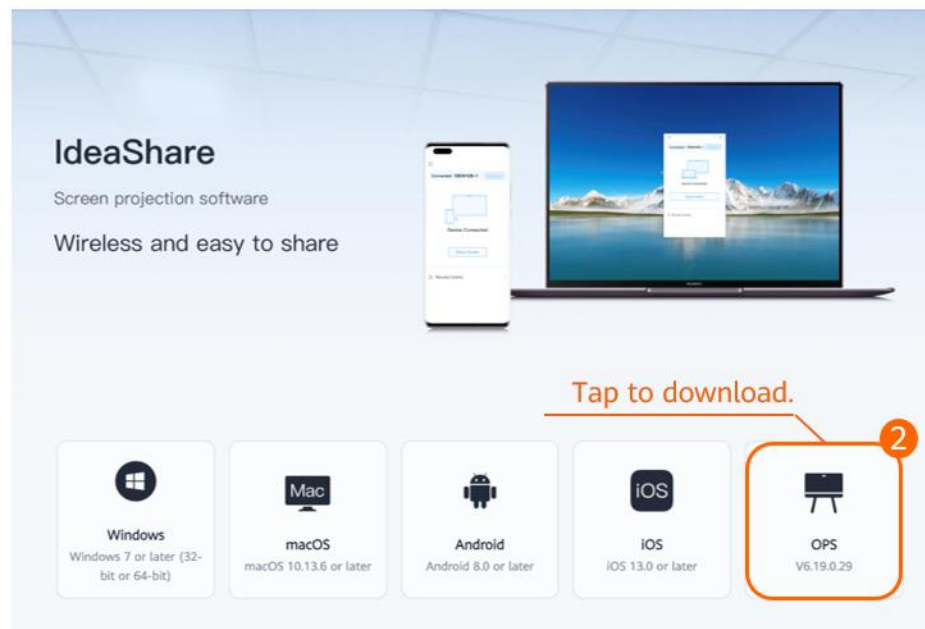
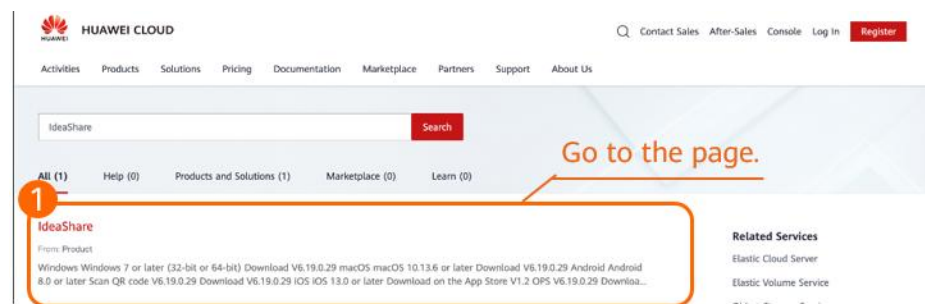
Method 2: Use the USB function of the OPS.

1. Connect a USB device, such as a USB flash drive, to the OPS.
2. Open **This PC** and open the file in the USB flash drive to share it.

Projection Using the OPS Service End


Open a browser on the OPS page, enter **huaweicloud.com** in the address box, search for **IdeaShare**, and perform operations below to download and install the OPS service end. After the installation, open the app and follow the onscreen instructions for projection. See [Figure 1](#).

Figure 1 Downloading the OPS service end



8 FAQs

What Can I Do If a Remote Site Cannot Hear the Local Microphone During a Meeting on the Windows UI?

1. Check whether the local microphone can pick up sounds properly.
Log in to the web interface (For details, see the *Quick Configuration*). Choose **Device Control** > **Audio Control** > **Input** and check whether the volume bar is moving when you are speaking.
2. Check whether **OPS first** is set at both the local and remote sites.
In Windows mode, swipe right from the left edge of the large screen to display the shortcut operation page, choose **Advanced** > **Camera & Microphone Settings**, and select **OPS first**.
3. Check whether the IdeaSpeakerphone audio adapter is selected and enabled.
On the Windows UI, tap and hold  in the lower right corner of the screen, and choose **Sound** > **Recording** > **Capture Input terminal (IdeaSpeakerphone)** > **Properties** > **Device usage** > **Use this device (enable)**.

What Can I Do If the Sound of the Local Site Heard at the Remote Site Is Unclear and the Reverberation Is Excessive?

1. Check whether the sampling rate of the IdeaSpeakerphone audio adapter on the local OPS is 48 kHz.

In Windows mode, tap and hold the speaker icon in the lower right corner of the screen, and choose **Sound > Recording > Capture Input terminal (IdeaSpeakerphone) > Properties > Advanced > 2 channel, 16 bit, 48000 Hz (DVD Quality)**.

2. Adjust reverberation suppression in special scenarios.

If the sound is not clear enough after you have performed the operations in step 1, check whether the reverberation in the local environment is excessive (the sound reverberation in glass room, living room, open exhibition hall, and classroom is relatively excessive). If yes, adjust the reverberation suppression strength mode (to a higher strength) to decrease the reverberation and improve sound clearness through internal algorithms.

In HarmonyOS mode, choose **Settings > Advanced > Input/Output**, enable **Reverberation Suppression**, and select a proper suppression mode.

What Can I Do If the Background Noise Becomes Louder When a Remote Site Listens to the Local Site in a Zoom Meeting?

Open the Zoom client on the local OPS and tap the ^ icon next to **Mute**. On the page that is displayed, choose **Audio Settings > Audio** and deselect **Automatically adjust microphone volume**.

What Can I Do If the Volume of the Local Audio Heard by the Remote Site Is Low?

1. Check whether the remote speaker is set to a low volume.

In Windows mode, swipe right from the left edge of the large screen to display the settings page and adjust the output volume.

2. If the problem persists after you perform step 1, increase the UAC gain of the local end.

In HarmonyOS mode, choose **Settings > Advanced > Input/Output** and adjust **UAC Gain**.

3. If the problem persists after you perform steps 1 and 2, check whether the volume of the local microphone is too low.

Use Zoom as an example. Tap the ^ icon next to **Mute**. On the page that is displayed, choose **Audio Settings > Audio**, deselect **Automatically adjust microphone volume**, and then adjust the microphone volume.

What Can I Do If Obvious Communication Delay Occurs When a Large Screen Is Used to Receive Sound?

The delay may be caused by the network jitter. The output device of the large screen can be set to **IdeaDisplay (Inter(R) Display Audio)** to shorten the delay.

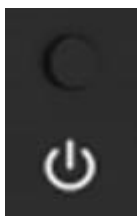
In Windows mode, tap and hold the speaker icon in the lower right corner, and choose **Open Sound settings > Sound > IdeaDisplay (Intel(R) Display Audio)**.

What Can I Do If I Forget the OPS Startup Password? How Do I Restore It to Its Factory Settings?

The OPS can be restored to factory settings. You can restore the OPS to the preset system to reset the OPS startup password.

1. Press the power button on the OPS to shut down the OPS.

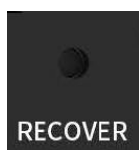
Figure 1 Power button



2. Select either of the two methods.

Method 1: Press and hold the **RECOVER** button on the OPS , and then press the power button on the OPS. When the system enters the restoration screen, release the **RECOVER** button. The system restoration starts.

Figure 2 RECOVER button



Method 2: Insert the keyboard and press the power button on the OPS to power it on. Then, hold down the **Ctrl** key and press the **F4** key repeatedly until the restoration system is entered. After the restoration is complete, the OPS automatically restarts.

NOTE

- The OPS does not support OS reinstallation or disk partition management.
- A paper clip or another slender object is required to hold down the RECOVER button.

When the Network Condition Is Good, There Is a Possibility That Audio Discontinuity or Freezing Occurs During a Meeting Using Third-Party Software. Why?

Our endpoint has 3A algorithms for noise reduction, which may conflict with those of some third-party meeting software. As a result, the audio is intermittent or frozen. You are advised to disable 3A algorithms of the software or enable the original sound mode (professional audio mode) in a third-party meeting to achieve better sound effects.

NOTE

3A algorithms refer to Acoustic Echo Cancellation (AEC) that prevents voice backhaul from the other party, Automatic Gain Control (AGC) that automatically adjusts the volume to avoid volume fluctuation, and Adaptive Noise Reduction (ANR) that removes unwanted background noises.

How Do I Shut Down the Large Screen After the OPS Is Installed?

Windows mode: Choose **Start > Power > Shut down** in the lower left corner of the Windows screen to turn off the OPS. Swipe right from the left edge of the large screen to display the shortcuts screen, and choose **Power > Shut down** to shut down the large screen.

HarmonyOS mode: Open the Windows app, choose **Start > Power > Shut down** in the lower left corner of the Windows screen to turn off the OPS, return to the homepage of the large screen, and choose **Power > Shut down** in the lower right corner to shut down the large screen.